

Set	Items	Description
? E	AU=POOLMAN, J?	
Ref	Items	Index-term
E1	1	AU=POOLMAN, J. P. J.
E2	5	AU=POOLMAN, J. T.
E3	0	*AU=POOLMAN, J?
E4	100	AU=POOLMAN, JAN
E5	9	AU=POOLMAN, JAN T
E6	69	AU=POOLMAN, JAN T.
E7	1	AU=POOLMAN, JAN TEUNI S
E8	3	AU=POOLMAN, JAN THEUNI S
E9	161	AU=POOLMAN, JT
E10	1	AU=POOLMAN, K. H.
E11	1	AU=POOLMAN, KENNETH
E12	1	AU=POOLMAN, LESLI E JOHN

Enter P or PAGE for more

? S E1-E8

1	AU=POOLMAN, J. P. J.
5	AU=POOLMAN, J. T.
0	AU=POOLMAN, J?
100	AU=POOLMAN, JAN
9	AU=POOLMAN, JAN T
69	AU=POOLMAN, JAN T.
1	AU=POOLMAN, JAN TEUNI S
3	AU=POOLMAN, JAN THEUNI S
S1	188 E1-E8

? S S1 AND BORDETELLA

188	S1
75297	BORDETELLA
S2	21 S1 AND BORDETELLA

? RD

>>>Duplicate detection is not supported for File 393.

>>>Duplicate detection is not supported for File 391.

>>>Records from unsupported files will be retained in the RD set.

S3 17 RD (unique items)

? T S3/3, K/1-17

>>>KW C option is not available in file(s): 399

3/3, K/1 (Item 1 from file: 24)  
 DIALOG(R) File 24: CSA Life Sciences Abstracts  
 (c) 2010 CSA. All rts. reserv.

0003404273 IP ACCESSI ON NO: 8616170  
 Protective activity of the Bordetella pertussis BrkA autotransporter  
 in the murine lung colonization model

Marr, Nico; Oliver, David C; Laurent, Vincianne; Poolman, Jan;  
 Denoel, Philippe; Fernandez, Rachel C  
 Department of Microbiology and Immunology, University of British Columbia,  
 2350 Health Sciences Mall, Vancouver, BC, Canada V6T 1Z3,  
 [mailto:rachelf@interchange.ubc.ca]

Vaccine, v 26, n 34, p 4306-4311, August 2008  
 PUBLICATION DATE: 2008

PUBLISHER: Elsevier Science, The Boulevard Langford Lane Kidlington Oxford  
 Page 1

OX5 1GB UK, [mailto:usinfo-f@elsevier.com], [URL:http://www.elsevier.nl]

DOCUMENT TYPE: Journal Article

RECORD TYPE: Abstract

LANGUAGE: English

SUMMARY LANGUAGE: English

ISSN: 0264-410X

ELECTRONIC ISSN: 1873-2518

FILE SEGMENT: Bacteriology Abstracts (Microbiology B); Immunology Abstracts

Protective activity of the Bordetella pertussis BrkA autotransporter in the murine lung colonization model

Marr, Nico; Oliver, David C; Laurent, Vincianne; Poolman, Jan; Denoel, Philippe; Fernandez, Rachel C

#### ABSTRACT:

This study examined the vaccine potential of the autotransporter protein BrkA of Bordetella pertussis in the sublethal intranasal murine respiratory challenge model of infection. Five different acellular pertussis...

... DESCRIPTORS: model s; BrkA protein; Clinical isolates; Colonization; Diphtheria; Hemagglutinins; Infection; Lung; Pertussis; Respiration; Tetanus; Toxoids; Vaccines; Bordetella pertussis

3/3, K/2 (Item 2 from file: 24)

DIALOG(R) File 24: CSA Life Sciences Abstracts

(c) 2010 CSA. All rights reserved.

0002868736 IP ACCESSION NO: 6972848

Comparison of acellular pertussis vaccines-induced immunity against infection due to Bordetella pertussis variant isolates in a mouse model

Denoel, Philippe; Godfroid, Fabrice; Guiso, Nicole; Hallander, Hans; Poolman, Jan  
Research & Development, GlaxoSmithKline Biologicals, Rue de l'Institut 89, 1330 Rixensart, Belgium [mailto:philippe.denoel@skbio.com]

Vaccine, v 23, n 46-47, p 5333-5341, 2005

PUBLICATION DATE: 2005

PUBLISHER: Butterworth-Heinemann, 313 Washington St. Newton MA 02158 USA

DOCUMENT TYPE: Journal Article

RECORD TYPE: Abstract

LANGUAGE: English

SUMMARY LANGUAGE: English

ISSN: 0264-410X

FILE SEGMENT: Bacteriology Abstracts (Microbiology B); Immunology Abstracts

Comparison of acellular pertussis vaccines-induced immunity against infection due to Bordetella pertussis variant isolates in a mouse model

Denoel, Philippe; Godfroid, Fabrice; Guiso, Nicole; Hallander, Hans; Poolman, Jan

#### ABSTRACT:

... observed in vaccinated populations. Concomitantly, emergence of novel

10574297BORDETELLA.txt

pertussis toxin and pertactin types in circulating Bordetella  
pertussis isolates was noticed. In this study, immunity induced by  
acellular vaccines against infection due...

DESCRIPTORS: Vaccines; Pertussis; Immunity; Infection; Animal models;  
Adolescence; pertussis toxin; Pili; Bordetella pertussis

3/3, K/3 (Item 1 from file: 399)

DI ALOG(R) File 399: CA SEARCH(R)

(c) 2010 American Chemical Society. All rights reserved.

149553936 CA: 149(25)553936d PATENT

Carrier protein effects on immune response to combination vaccines

INVENTOR(AUTHOR): Poolman, Jan

LOCATION: Belg.

ASSIGNEE: GlaxoSmithKline Biologicals S. A.

PATENT: PCT International ; WO 2008135514 A1 DATE: 20081113

APPLICATION: WO 2008EP55383 (20080430) \*GB 20078522 (20070502) \*GB  
200712658 (20070628) \*GB 20082108 (20080205)

PAGES: 134pp. CODEN: PIXXD2 LANGUAGE: English

PATENT CLASSIFICATIONS:

IPC/8 + Level Value Position Status Version Action Source Office:

A61K-0039/116 A I F B 20060101 H EP

A61P-0031/04 A I L B 20060101 H EP

DESIGNATED COUNTRIES: AE; AG; AL; AM; AO; AT; AU; AZ; BA; BB; BG; BH; BR;  
BW; BY; BZ; CA; CH; CN; CO; CR; CU; CZ; DE; DK; DM; DO; DZ; EC; EE; EG; ES;  
FI; GB; GD; GE; GH; GM; GT; HN; HR; HU; ID; IL; IN; IS; JP; KE; KG; KM; KN;  
KP; KR; KZ; LA; LC; LK; LR; LS; LT; LU; LY; MA; MD; ME; MG; MK; MN; MW; MX;  
MY; MZ; NA; NG; NI; NO; NZ; OM; PG; PH; PL; PT; RO; RS; RU; SC; SD; SE; SG;  
SK; SL; SM; SV; SY; TJ; TM; TN; TR; TT DESIGNATED REGIONAL: AT; BE; BG; CH;  
CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HR; HU; IE; IS; IT; LT; LU; LV;  
MC; MT; NL; NO; PL; PT; RO; SE; SI; SK; TR; BF; BJ; CF; CG; CI; CM; GA; GN;  
GQ; GW; ML; MR; NE; SN; TD; TG; BW; GH; GM; KE; LS; MW; MZ; NA; SD; SL; SZ;  
TZ; UG; ZM; ZW AM; AZ; BY; KG; KZ; MD; RU; TJ; TM

3/3, K/4 (Item 2 from file: 399)

DI ALOG(R) File 399: CA SEARCH(R)

(c) 2010 American Chemical Society. All rights reserved.

147275067 CA: 147(13)275067b JOURNAL

Acellular pertussis vaccines and the role of pertactin and fimbriae

AUTHOR(S): Poolman, Jan T.; Hallander, Hans O.

LOCATION: Head of Bacterial Vaccines, R&D Bacterial Vaccine Program, Rue  
de l'Institut, GlaxoSmithKline Biologicals, 1330, Rixensart, Belg.

JOURNAL: Expert Rev. Vaccines (Expert Review of Vaccines) DATE: 2007

VOLUME: 6 NUMBER: 1 PAGES: 47-56 CODEN: ERVXAX ISSN: 1476-0584

LANGUAGE: English PUBLISHER: Future Drugs Ltd.

3/3, K/5 (Item 3 from file: 399)

DI ALOG(R) File 399: CA SEARCH(R)

(c) 2010 American Chemical Society. All rights reserved.

147116454 CA: 147(6)116454j PATENT

Vaccines against Neisseria meningitidis and Streptococcus pneumoniae  
based on conjugated capsular polysaccharides from multiple meningococcal  
and/or pneumococcal serogroups

INVENTOR(AUTHOR): Poolman, Jan

LOCATION: Belg.

ASSIGNEE: GlaxoSmithKline Biologicals S. A.

PATENT: PCT International ; WO 200771786 A2 DATE: 20070628

APPLI CATI ON: WO 2006EP70173 (20061222) \*GB 200526412 (20051223) \*GB  
20067088 (20060407)

PAGES: 53pp. CODEN: PI XXD2 LANGUAGE: English

PATENT CLASSI FI CATI ONS:

I PCR/ 8 + Level Value Position Status Version Action Source Office:

A61K-0039/095 A I F B 20060101 H EP

A61K-0039/09 A I L B 20060101 H EP

A61K-0039/116 A I L B 20060101 H EP

DESI GNATED COUNTRI ES: AE; AG; AL; AM; AT; AU; AZ; BA; BB; BG; BR; BW; BY;  
BZ; CA; CH; CN; CO; CR; CU; CZ; DE; DK; DM; DZ; EC; EE; EG; ES; FI; GB; GD;  
GE; GH; GM; GT; HN; HR; HU; ID; IL; IN; IS; JP; KE; KG; KM; KN; KP; KR; KZ;  
LA; LC; LK; LR; LS; LT; LU; LV; LY; MA; MD; MG; MK; MN; MW; MX; MY; MZ; NA;  
NG; NI; NO; NZ; OM; PG; PH; PL; PT; RO; RS; RU; SC; SD; SE; SG; SK; SL; SM;  
SV; SY; TJ; TM; TN; TR; TT; TZ; UA; UG; DESI GNATED REGI ONAL: AT; BE; BG; CH;  
CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HU; IE; IS; IT; LT; LU; LV; MC;  
NL; PL; PT; RO; SE; SI; SK; TR; BF; BJ; CF; CG; CI; CM; GA; GN; GQ; GW; ML;  
MR; NE; SN; TD; TG; BW; GH; GM; KE; LS; MW; MZ; NA; SD; SL; SZ; TZ; UG; ZM;  
ZW; AM; AZ; BY; KG; KZ; MD; RU; TJ; TM

3/3, K/6 (Item 4 from file: 399)

DI ALOG( R) File 399: CA SEARCH( R)

(c) 2010 American Chemical Society. All rts. reserv.

146099123 CA: 146(6)99123k PATENT

Immunogenic composition containing *Neisseria meningitidis* capsular  
saccharides

I NVENTOR( AUTHOR): Bi emans, Ralph Leon; Boutri au, Domi ni que; Capi au,  
Carine; Denoel, Philippe; Duvivier, Pierre; Pool man, Jan

LOCATI ON: Belg.

ASSI GNEE: Gl axosmi thkl ine Bi ol ogi cal s S. A.

PATENT: PCT International ; WO 200700341 A2 DATE: 20070104

APPLI CATI ON: WO 2006EP6268 (20060623) \*GB 200513069 (20050627) \*GB  
200513071 (20050627) \*GB 200515556 (20050728) \*GB 200524204 (20051128) \*GB  
200526041 (20051221) \*GB 200526040 (20051221)

PAGES: 66pp. CODEN: PI XXD2 LANGUAGE: English

PATENT CLASSI FI CATI ONS:

I PCR/ 8 + Level Value Position Status Version Action Source Office:

A61K-0039/095 A I F B 20060101 H EP

A61K-0039/102 A I L B 20060101 H EP

A61K-0039/116 A I L B 20060101 H EP

DESI GNATED COUNTRI ES: AE; AG; AL; AM; AT; AU; AZ; BA; BB; BG; BR; BW; BY;  
BZ; CA; CH; CN; CO; CR; CU; CZ; DE; DK; DM; DZ; EC; EE; EG; ES; FI; GB; GD;  
GE; GH; GM; HN; HR; HU; ID; IL; IN; IS; JP; KE; KG; KM; KN; KP; KR; KZ; LA;  
LC; LK; LR; LS; LT; LU; LV; LY; MA; MD; MG; MK; MN; MW; MX; MZ; NA; NG; NI;  
NO; NZ; OM; PG; PH; PL; PT; RO; RS; RU; SC; SD; SE; SG; SK; SL; SM; SY; TJ;  
TM; TN; TR; TT; TZ; UA; UG; US; UZ; VC DESI GNATED REGI ONAL: AT; BE; BG; CH;  
CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HU; IE; IS; IT; LT; LU; LV; MC;  
NL; PL; PT; RO; SE; SI; SK; TR; BF; BJ; CF; CG; CI; CM; GA; GN; GQ; GW; ML;  
MR; NE; SN; TD; TG; BW; GH; GM; KE; LS; MW; MZ; NA; SD; SL; SZ; TZ; UG; ZM;  
ZW; AM; AZ; BY; KG; KZ; MD; RU; TJ; TM

3/3, K/7 (Item 5 from file: 399)

DI ALOG( R) File 399: CA SEARCH( R)

(c) 2010 American Chemical Society. All rts. reserv.

146099122 CA: 146(6)99122j PATENT

*Neisseria meningitidis* capsular polysaccharide vaccine conjugate

I NVENTOR( AUTHOR): Bi emans, Ralph Leon; Boutri au, Domi ni que; Capi au,  
Carine; Denoel, Philippe; Duvivier, Pierre; Pool man, Jan

LOCATI ON: Belg.

ASSI GNEE: Gl axosmi thkl ine Bi ol ogi cal s S. A.

10574297BORDETELLA.txt

PATENT: PCT International ; WO 200700314 A2 DATE: 20070104

APPLI CATION: WO 2006EP6188 (20060623) \*GB 200513071 (20050627) \*GB  
200513069 (20050627) \*GB 200515556 (20050728) \*GB 200524204 (20051128) \*GB  
200526040 (20051221) \*GB 200526041 (20051221)

PAGES: 46pp. CODEN: PIXXD2 LANGUAGE: English

PATENT CLASSI FICATIONS:

I PCR/ 8 + Level Value Position Status Version Action Source Office:

A61K-0039/095 A I F B 20060101 H EP

A61K-0039/102 A I L B 20060101 H EP

A61K-0039/116 A I L B 20060101 H EP

A61P-0031/04 A I L B 20060101 H EP

DESIGNATED COUNTRIES: AE; AG; AL; AM; AT; AU; AZ; BA; BB; BG; BR; BW; BY;  
BZ; CA; CH; CN; CO; CR; CU; CZ; DE; DK; DM; DZ; EC; EE; EG; ES; FI; GB; GD;  
GE; GH; GM; HN; HR; HU; ID; IL; IN; IS; JP; KE; KG; KM; KN; KP; KR; KZ; LA;  
LC; LK; LR; LS; LT; LU; LV; LY; MA; MD; MG; MK; MN; MW; MX; MZ; NA; NG; NI;  
NO; NZ; OM; PG; PH; PL; PT; RO; RS; RU; SC; SD; SE; SG; SK; SL; SM; SY; TJ;  
TM; TN; TR; TT; TZ; UA; UG; US; UZ; VC DESIGNATED REGIONAL: AT; BE; BG; CH  
; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HU; IE; IS; IT; LT; LU; LV; MC;  
NL; PL; PT; RO; SE; SI; SK; TR; BF; BJ; CF; CG; CI; CM; GA; GN; GQ; GW; ML;  
MR; NE; SN; TD; TG; BW; GH; GM; KE; LS; MW; MZ; NA; SD; SL; SZ; TZ; UG; ZM;  
ZW AM; AZ; BY; KG; KZ; MD; RU; TJ; TM

3/3, K/8 (Item 6 from file: 399)

DI ALOG(R) File 399: CA SEARCH(R)

(c) 2010 American Chemical Society. All rts. reserv.

146099120 CA: 146(6)99120g PATENT

Immunogenic composition containing *Neisseria meningitidis* capsular  
polysaccharides

INVENTOR(AUTHOR): Bi emans, Ralph Leon; Boutri au, Domi nique; Capi au,  
Carine; Denoel, Philippe; Duvivier, Pierre; Pool man, Jan

LOCATI ON: Bel g.

ASSIGNEE: Gl axosmithkline Bi ological s S. A.

PATENT: PCT International ; WO 200700342 A2 DATE: 20070104

APPLI CATION: WO 2006EP6269 (20060623) \*GB 200513069 (20050627) \*GB  
200513071 (20050627) \*GB 200515556 (20050728) \*GB 200524204 (20051128) \*GB  
200526040 (20051221) \*GB 200526041 (20051221)

PAGES: 64pp. CODEN: PIXXD2 LANGUAGE: English

PATENT CLASSI FICATIONS:

I PCR/ 8 + Level Value Position Status Version Action Source Office:

A61K-0039/095 A I F B 20060101 H EP

A61K-0039/102 A I L B 20060101 H EP

A61K-0039/116 A I L B 20060101 H EP

A61P-0031/04 A I L B 20060101 H EP

DESIGNATED COUNTRIES: AE; AG; AL; AM; AT; AU; AZ; BA; BB; BG; BR; BW; BY;  
BZ; CA; CH; CN; CO; CR; CU; CZ; DE; DK; DM; DZ; EC; EE; EG; ES; FI; GB; GD;  
GE; GH; GM; HN; HR; HU; ID; IL; IN; IS; JP; KE; KG; KM; KN; KP; KR; KZ; LA;  
LC; LK; LR; LS; LT; LU; LV; LY; MA; MD; MG; MK; MN; MW; MX; MZ; NA; NG; NI;  
NO; NZ; OM; PG; PH; PL; PT; RO; RS; RU; SC; SD; SE; SG; SK; SL; SM; SY; TJ;  
TM; TN; TR; TT; TZ; UA; UG; US; UZ; VC DESIGNATED REGIONAL: AT; BE; BG; CH  
; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HU; IE; IS; IT; LT; LU; LV; MC;  
NL; PL; PT; RO; SE; SI; SK; TR; BF; BJ; CF; CG; CI; CM; GA; GN; GQ; GW; ML;  
MR; NE; SN; TD; TG; BW; GH; GM; KE; LS; MW; MZ; NA; SD; SL; SZ; TZ; UG; ZM;  
ZW AM; AZ; BY; KG; KZ; MD; RU; TJ; TM

3/3, K/9 (Item 7 from file: 399)

DI ALOG(R) File 399: CA SEARCH(R)

(c) 2010 American Chemical Society. All rts. reserv.

146099118 CA: 146(6)99118n PATENT

Combi nation vaccines comprising *Haemophilus influenzae* type b saccharide

10574297BORDETELLA.txt

conjugate, an addnl. bacterial saccharide conjugate, and further antigens  
INVENTOR(AUTHOR): Biemans, Ralph Leon; Boutriau, Dominique; Capi au,  
Carine; Denoel, Philippe; Duvivier, Pierre; Poolman, Jan

LOCATION: Belg.

ASSIGNEE: Glaxosmithkline Biologicals S.A.

PATENT: PCT International ; WO 200700327 A1 DATE: 20070104

APPLICATION: WO 2006EP6220 (20060623) \*GB 200513069 (20050627) \*GB  
200513071 (20050627) \*GB 200515556 (20050728) \*GB 200524204 (20051128) \*GB  
200526041 (20051221) \*GB 200526040 (20051221)

PAGES: 49pp. CODEN: PIXXD2 LANGUAGE: English

PATENT CLASSIFICATIONS:

IPC/8 + Level Value Position Status Version Action Source Office:

A61K-0039/095 A I F B 20060101 H EP

A61K-0039/102 A I L B 20060101 H EP

A61K-0039/116 A I L B 20060101 H EP

DESIGNATED COUNTRIES: AE; AG; AL; AM; AT; AU; AZ; BA; BB; BG; BR; BW; BY;  
BZ; CA; CH; CN; CO; CR; CU; CZ; DE; DK; DM; DZ; EC; EE; EG; ES; FI; GB; GD;  
GE; GH; GM; HN; HR; HU; ID; IL; IN; IS; JP; KE; KG; KM; KN; KP; KR; KZ; LA;  
LC; LK; LR; LS; LT; LU; LV; LY; MA; MD; MG; MK; MN; MW; MX; MZ; NA; NG; NI;  
NO; NZ; OM; PG; PH; PL; PT; RO; RS; RU; SC; SD; SE; SG; SK; SL; SM; SY; TJ;  
TM; TN; TR; TT; TZ; UA; UG; US; UZ; VC DESIGNATED REGIONAL: AT; BE; BG; CH;  
CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HU; IE; IS; IT; LT; LU; LV; MC;  
NL; PL; PT; RO; SE; SI; SK; TR; BF; BJ; CF; CG; CI; CM; GA; GN; GQ; GW; ML;  
MR; NE; SN; TD; TG; BW; GH; GM; KE; LS; MW; MZ; NA; SD; SL; SZ; TZ; UG; ZM;  
ZW AM; AZ; BY; KG; KZ; MD; RU; TJ; TM

3/3, K/10 (Item 8 from file: 399)

DIALOG(R) File 399: CA SEARCH(R)

(c) 2010 American Chemical Society. All rts. reserv.

145005931 CA: 145(1)5931b JOURNAL

Are vaccination programs and isolate polymorphism linked to pertussis  
re-emergence?

AUTHOR(S): Godfroid, Fabrice; Denoel, Philippe; Poolman, Jan

LOCATION: DAP Bacterial Vaccine Preclinical Immunology, Research &  
Development, GlaxoSmithKline Biologicals, 1330, Rixensart, Belg.

JOURNAL: Expert Rev. Vaccines (Expert Review of Vaccines) DATE: 2005

VOLUME: 4 NUMBER: 5 PAGES: 757-779 CODEN: ERVXAX ISSN: 1476-0584

LANGUAGE: English PUBLISHER: Future Drugs Ltd.

3/3, K/11 (Item 9 from file: 399)

DIALOG(R) File 399: CA SEARCH(R)

(c) 2010 American Chemical Society. All rts. reserv.

142387960 CA: 142(21)387960r PATENT

Protein and nucleotide sequences of Bordetella protein BASB232 and its  
therapeutic use

INVENTOR(AUTHOR): Castado, Gindy; Denoel, Philippe; Godfroid, Fabrice;  
Poolman, Jan

LOCATION: Belg.

ASSIGNEE: Glaxosmithkline Biologicals S. A.

PATENT: PCT International ; WO 200532584 A2 DATE: 20050414

APPLICATION: WO 2004EP11082 (20041001) \*GB 200323113 (20031002) \*GB  
200323112 (20031002)

PAGES: 172 pp. CODEN: PIXXD2 LANGUAGE: English

PATENT CLASSIFICATIONS:

CLASS: A61K-039/10A

DESIGNATED COUNTRIES: AE; AG; AL; AM; AT; AU; AZ; BA; BB; BG; BR; BW; BY;  
BZ; CA; CH; CN; CO; CR; CU; CZ; DE; DK; DM; DZ; EC; EE; EG; ES; FI; GB; GD;  
GE; GH; GM; HN; HR; HU; ID; IL; IN; IS; JP; KE; KG; KP; KR; KZ; LC; LK; LR; LS;  
LT; LU; LV; MA; MD; MG; MK; MN; MW; MX; MZ; NA; NI; NO; NZ; OM; PG; PH; PL;

10574297BORDETELLA.txt

PT; RO; RU; SC; SD; SE; SG; SK; SL; SY; TJ; TM; TN; TR; TT; TZ; UA; UG; US;  
UZ; VC; VN; YU; ZA; ZM; ZW DESIGNATED REGIONAL: BW; GH; GM; KE; LS; MW; MZ;  
; NA; SD; SL; SZ; TZ; UG; ZM; ZW AM; AZ; BY; KG; KZ; MD; RU; TJ; TM; AT;  
BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HU; IE; IT; LU; MC; NL;  
PL; PT; RO; SE; SI; SK; TR; BF; BJ; CF; CG; CI; CM; GA; GN; GQ; GW; ML; MR;  
NE; SN; TD; TG

3/3, K/12 (Item 10 from file: 399)

DI ALOG(R) File 399: CA SEARCH(R)

(c) 2010 American Chemical Society. All rts. reserv.

137293549 CA: 137(20)293549h PATENT

Multi-valent vaccine compositions

INVENTOR(AUTHOR): Boutriau, Dominique; Capi au, Carine; Desmons, Pierre  
Michel; Lempi ne, Domi ni que; Pool man, Jan

LOCATION: Belg.

ASSIGNEE: Glaxosmithkline Biologicals S.A.

PATENT: PCT International ; WO 200280965 A2 DATE: 20021017

APPLICATION: WO 2002EP3573 (20020328) \*GB 20018364 (20010403)

PAGES: 31 pp. CODEN: PIXXD2 LANGUAGE: English

PATENT CLASSIFICATIONS:

CLASS: A61K-039/295A; A61K-039/385B; A61P-031/04B; A61P-031/12B

DESIGNATED COUNTRIES: AE; AG; AL; AM; AT; AU; AZ; BA; BB; BG; BR; BY; BZ;  
CA; CH; CN; CO; CR; CU; CZ; DE; DK; DM; DZ; EC; EE; ES; FI; GB; GD; GE; GH;  
GM; HR; HU; ID; IL; IN; IS; JP; KE; KG; KP; KR; KZ; LC; LK; LR; LS; LT; LU;  
LV; MA; MD; MG; MK; MN; MW; MX; MZ; NO; NZ; OM; PH; PL; PT; RO; RU; SD; SE;  
SG; SI; SK; SL; TJ; TM; TN; TR; TT; TZ; UA; UG; US; UZ; VN; YU; ZA; ZM; ZW  
AM; AZ; BY; KG; KZ; MD; RU; TJ; TM DESIGNATED REGIONAL: GH; GM; KE; LS; MW  
; MZ; SD; SL; SZ; TZ; UG; ZM; ZW AT; BE; CH; CY; DE; DK; ES; FI; FR; GB;  
GR; IE; IT; LU; MC; NL; PT; SE; TR; BF; BJ; CF; CG; CI; CM; GA; GN; GQ; GW  
ML; MR; NE; SN; TD; TG

3/3, K/13 (Item 11 from file: 399)

DI ALOG(R) File 399: CA SEARCH(R)

(c) 2010 American Chemical Society. All rts. reserv.

137184447 CA: 137(13)184447c PATENT

Vaccine composition comprising hyperblebbing Gram-neg. bacteria which  
have down-regulated tol genes and mutated peptidoglycan-binding proteins

INVENTOR(AUTHOR): Berthet, Francois-Xavier Jacques; Denoel, Philippe;  
Neyt, Cecile Anne; Pool man, Jan; Thonnard, Joelle

LOCATION: Belg.

ASSIGNEE: Smithkline Beecham Biologicals S.A.

PATENT: PCT International ; WO 200262378 A2 DATE: 20020815

APPLICATION: WO 2002EP1361 (20020208) \*GB 20013171 (20010208)

PAGES: 71 pp. CODEN: PIXXD2 LANGUAGE: English

PATENT CLASSIFICATIONS:

CLASS: A61K-039/00A

DESIGNATED COUNTRIES: AE; AG; AL; AM; AT; AU; AZ; BA; BB; BG; BR; BY; BZ;  
CA; CH; CN; CO; CR; CU; CZ; DE; DK; DM; DZ; EC; EE; ES; FI; GB; GD; GE; GH;  
GM; HR; HU; ID; IL; IN; IS; JP; KE; KG; KP; KR; KZ; LC; LK; LR; LS; LT; LU;  
LV; MA; MD; MG; MK; MN; MW; MX; MZ; NO; NZ; OM; PH; PL; PT; RO; RU; SD; SE;  
SG; SI; SK; SL; TJ; TM; TN; TR; TT; TZ; UA; UG; US; UZ; VN; YU; ZA; ZM; ZW  
AM; AZ; BY; KG; KZ; MD; RU; TJ; TM DESIGNATED REGIONAL: GH; GM; KE; LS; MW  
; MZ; SD; SL; SZ; TZ; UG; ZM; ZW AT; BE; CH; CY; DE; DK; ES; FI; FR; GB;  
GR; IE; IT; LU; MC; NL; PT; SE; TR; BF; BJ; CF; CG; CI; CM; GA; GN; GQ; GW  
ML; MR; NE; SN; TD; TG

3/3, K/14 (Item 12 from file: 399)

DI ALOG(R) File 399: CA SEARCH(R)

(c) 2010 American Chemical Society. All rights reserved.

136068701 CA: 136(5)68701m PATENT  
Multi-valent capsular polysaccharide vaccines  
INVENTOR(AUTHOR): Boutriaux, Dominique; Capiou, Carine; Desmons, Pierre  
Michel; Lemoine, Dominique; Poolman, Jan  
LOCATION: Belg.  
ASSIGNEE: Smithkline Beecham Biologicals S.A.  
PATENT: PCT International ; WO 200200249 A2 DATE: 20020103  
APPLICATION: WO 2001EP7288 (20010627) \*GB 200015999 (20000629) \*GB  
20018363 (20010403) \*GB 20018364 (20010403)  
PAGES: 31 pp. CODEN: PIXXD2 LANGUAGE: English  
PATENT CLASSIFICATIONS:  
CLASS: A61K-039/00A  
DESIGNATED COUNTRIES: AE; AG; AL; AM; AT; AU; AZ; BA; BB; BG; BR; BY; BZ;  
CA; CH; CN; CO; CR; CU; CZ; DE; DK; DM; DZ; EC; EE; ES; FI; GB; GD; GE; GH;  
GM; HR; HU; ID; IL; IN; IS; JP; KE; KG; KP; KR; KZ; LC; LK; LR; LS; LT; LU;  
LV; MA; MD; MG; MK; MN; MW; MX; MZ; NO; NZ; PL; PT; RO; RU; SD; SE; SG; SI;  
SK; SL; TJ; TM; TR; TT; TZ; UA; UG; US; UZ; VN; YU; ZA; ZW; AM; AZ; BY; KG;  
KZ; MD; RU; TJ; TM DESIGNATED REGIONAL: GH; GM; KE; LS; MW; MZ; SD; SL; SZ;  
TZ; UG; ZW; AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LU; MC;  
NL; PT; SE; TR; BF; BJ; CF; CG; CI; CM; GA; GN; GW; ML; MR; NE; SN; TD; TG

3/3, K/15 (Item 13 from file: 399)  
DIALOG(R) File 399: CA SEARCH(R)  
(c) 2010 American Chemical Society. All rights reserved.

123253879 CA: 123(19)253879v JOURNAL  
The purification and protective capacity of Bordetella pertussis outer  
membrane proteins  
AUTHOR(S): Hamstra, Hendrik-Jan; Kuipers, Betsy; Schijf-Evers, Danny;  
Loggen, Henk G.; Poolman, Jan T.  
LOCATION: National Institute of Public Health and Environmental  
Protection, 3720 BA, Bilthoven, Neth.  
JOURNAL: Vaccine DATE: 1995 VOLUME: 13 NUMBER: 8 PAGES: 747-52  
CODEN: VACCDE ISSN: 0264-410X LANGUAGE: English MEETING DATE: 950000

3/3, K/16 (Item 14 from file: 399)  
DIALOG(R) File 399: CA SEARCH(R)  
(c) 2010 American Chemical Society. All rights reserved.

117190112 CA: 117(19)190112t PATENT  
Vaccine suitable for combatting Bordetella pertussis  
INVENTOR(AUTHOR): Hamstra, Hendrik Jan; Poolman, Jan Teunis  
LOCATION: Neth.  
ASSIGNEE: Minister van Welzijn, Volksgezondheid en Cultuur  
PATENT: PCT International ; WO 9205194 A1 DATE: 920402  
APPLICATION: WO 91NL185 (910925) \*NL 902092 (900925)  
PAGES: 25 pp. CODEN: PIXXD2 LANGUAGE: English  
PATENT CLASSIFICATIONS:  
CLASS: C07K-013/00A; A61K-039/10B  
DESIGNATED COUNTRIES: CA; US DESIGNATED REGIONAL: AT; BE; CH; DE; DK; ES;  
FR; GB; GR; IT; LU; NL; SE

3/3, K/17 (Item 15 from file: 399)  
DIALOG(R) File 399: CA SEARCH(R)  
(c) 2010 American Chemical Society. All rights reserved.

114160601 CA: 114(17)160601x JOURNAL  
Description of a hybridoma bank towards Bordetella pertussis toxin and  
Page 8



surface antigens

AUTHOR(S): Poolman, Jan T.; Kuipers, Betsy; Vogel, Mari L.; Hamstra, Hendrik J.; Nagel, Jaap  
 LOCATION: Lab. Bact. Vaccines, Natl. Inst. Public Health Environ. Prot., 3720 BA, Bilthoven, Neth.  
 JOURNAL: Microb. Pathog. DATE: 1990 VOLUME: 8 NUMBER: 6 PAGES: 377-82  
 CODEN: MPAEV ISSN: 0882-4010 LANGUAGE: English  
 ? E AU= GODFROID, F?

Ref	Items	Index-term
E1	14	AU=GODFROID, F
E2	6	AU=GODFROID, F.
E3	0	*AU=GODFROID, F?
E4	16	AU=GODFROID, FABRI CE
E5	1	AU=GODFROID, H
E6	17	AU=GODFROID, H.
E7	2	AU=GODFROID, HENRI
E8	59	AU=GODFROID, J
E9	110	AU=GODFROID, J.
E10	105	AU=GODFROID, J. J.
E11	36	AU=GODFROID, J. - J.
E12	3	AU=GODFROID, J*

Enter P or PAGE for more

? S E1  
 S4 14 AU= GODFROID, F  
 ? RD

>>>Duplicate detection is not supported for File 393.

>>>Duplicate detection is not supported for File 391.

>>>Records from unsupported files will be retained in the RD set.

S5 7 RD (unique items)

? T S5/3, K/1-7

>>>KW C option is not available in file(s): 399

5/3, K/1 (Item 1 from file: 24)  
 DIALOG(R) File 24: CSA Life Sciences Abstracts  
 (c) 2010 CSA. All rts. reserv.

0002670048 IP ACCESSION NO: 6134246  
 Diphtheria-tetanus-pertussis (DTP) combination vaccines and evaluation of pertussis immune responses

Godfroid, F; Denoel, P; de Grave, D; Schuerman, L; Poolman, J  
 Research & Development, GlaxoSmithKline Biologicals, Rue de l'Institut 89, B-1330 Rixensart, Belgium [mailto:jan.poolman@skbio.com]

International Journal of Medical Microbiology, v 294, n 5, p 269-276,  
 October 2004  
 PUBLICATION DATE: 2004

DOCUMENT TYPE: Journal Article  
 RECORD TYPE: Abstract  
 LANGUAGE: English  
 SUMMARY LANGUAGE: English  
 ISSN: 1438-4221  
 FILE SEGMENT: Bacteriology Abstracts (Microbiology B)

Godfroid, F; Denoel, P; de Grave, D; Schuerman, L; Poolman, J

5/3, K/2 (Item 2 from file: 24)  
DIALOG(R) File 24: CSA Life Sciences Abstracts  
(c) 2010 CSA. All rights reserved.

0002170857 IP ACCESSION NO: 4811270  
Genetic organisation of the lipopolysaccharide O-antigen biosynthesis  
region of *Brucella melitensis* 16M (wbk)

Godfroid, F; Cloeckaert, A; Taminau, B; Danese, I; Tibor, A; de  
Bolle, X; Mertens, P; Letesson, J-J\*  
Unite de recherche en biologie moléculaire (URBM), Laboratoire  
d'immunologie et de microbiologie, Facultés universitaires Notre Dame de la  
Paix, 61, rue de Bruxelles, 5000 Namur, Belgium  
[mailto:Jean-Jacques.Letesson@undp.ac.be]

Research in Microbiology, v 151, n 8, p 655-668, October 2000  
PUBLICATION DATE: 2000

DOCUMENT TYPE: Journal Article  
RECORD TYPE: Abstract  
LANGUAGE: English  
SUMMARY LANGUAGE: English  
ISSN: 0923-2508  
FILE SEGMENT: Bacteriology Abstracts (Microbiology B)  
Godfroid, F; Cloeckaert, A; Taminau, B; Danese, I; Tibor, A; de  
Bolle, X; Mertens, P; Letesson...

5/3, K/3 (Item 3 from file: 24)  
DIALOG(R) File 24: CSA Life Sciences Abstracts  
(c) 2010 CSA. All rights reserved.

0002123740 IP ACCESSION NO: 4733494  
Conservation of seven genes involved in the biosynthesis of the  
lipopolysaccharide O-side chain in *Brucella* spp.

Cloeckaert, A; Grayon, M; Verger, J-M; Letesson, J-J; Godfroid, F  
Laboratoire de pathologie infectieuse et immunologie, Institut national de  
la recherche agronomique, 37380 Nouzilly, France,  
[mailto:cloeckae@ours.inra.fr]

Research in Microbiology, v 151, n 3, p 209-216, April 2000  
PUBLICATION DATE: 2000

DOCUMENT TYPE: Journal Article  
RECORD TYPE: Abstract  
LANGUAGE: English  
SUMMARY LANGUAGE: English  
ISSN: 0923-2508  
FILE SEGMENT: Bacteriology Abstracts (Microbiology B)

Cloeckaert, A; Grayon, M; Verger, J-M; Letesson, J-J; Godfroid, F

5/3, K/4 (Item 4 from file: 24)  
DIALOG(R) File 24: CSA Life Sciences Abstracts  
(c) 2010 CSA. All rights reserved.

0002037533 IP ACCESSION NO: 4624484  
Antigenic Properties of Peptidic Mimics for Epitopes of the  
Lipopolysaccharide from *Brucella*

De Bolle, X; Laurent, T; Tibor, A; Godfroid, F; Weynants, V;  
Page 10

Letesson, J; Mertens, P  
Immunology and Microbiology Laboratory, Research Unit in Molecular Biology  
(URBM), University of Namur (FUNDP), 61 rue de Bruxelles, Namur, B5000,  
Belgium

Journal of Molecular Biology, v 294, n 1, p 181-191, November 19, 1999  
PUBLICATION DATE: 1999

PUBLISHER: Academic Press

DOCUMENT TYPE: Journal Article

RECORD TYPE: Abstract

LANGUAGE: English

SUMMARY LANGUAGE: English

ISSN: 0022-2836

FILE SEGMENT: Bacteriology Abstracts (Microbiology B)

De Bolle, X; Laurent, T; Tibor, A; Godfroid, F; Weynants, V;  
Letesson, J; Mertens, P

5/3, K/5 (Item 5 from file: 24)  
DIALOG(R) File 24: CSA Life Sciences Abstracts  
(c) 2010 CSA. All rights reserved.

0001921251 IP ACCESSION NO: 4433413  
Identification of the perosamine synthetase gene of *Brucella melitensis* 16M  
and involvement of lipopolysaccharide O side chain in *Brucella* survival in  
mice and in macrophages

Godfroid, F; Taminau, B; Danese, I; Denoel, Ph; Tibor, A;  
Weynants, V; Cloeckaert, A; Godfroid, J; Letesson, J-J  
Unité de Recherche en Biologie Moléculaire (URBM), Laboratoire  
d'Immunologie et de Microbiologie, Faculté Universitaire Notre Dame de la  
Paix, 61 rue de Bruxelles, B-5000, Namur, Belgium  
[mailto:Fabrice.Godfroid@undp.ac.be]

Infection and Immunity, v 66, n 11, p 5485-5493, November 1998  
PUBLICATION DATE: 1998

DOCUMENT TYPE: Journal Article

RECORD TYPE: Abstract

LANGUAGE: English

SUMMARY LANGUAGE: English

ISSN: 0019-9567

FILE SEGMENT: Bacteriology Abstracts (Microbiology B); Genetics Abstracts;  
Nucleic Acids Abstracts

Godfroid, F; Taminau, B; Danese, I; Denoel, Ph; Tibor, A;  
Weynants, V; Cloeckaert, A; Godfroid, J...

5/3, K/6 (Item 6 from file: 24)  
DIALOG(R) File 24: CSA Life Sciences Abstracts  
(c) 2010 CSA. All rights reserved.

0001787121 IP ACCESSION NO: 4223763  
Survival of a bacterioferritin deletion mutant of *Brucella melitensis* 16M  
in human monocyte-derived macrophages

Denoel, PA; Crawford, RM; Zygmunt, MS; Tibor, A; Weynants, VE;  
Godfroid, F; Hoover, DL; Letesson, J-J  
Lab. de Microbiologie et d'Immunologie, F.U.N.D.P., 61, Rue de Bruxelles,  
B-5000 Namur, Belgium

Infection and Immunity, v 65, n 10, p 4337-4340, October 1997  
PUBLICATION DATE: 1997

DOCUMENT TYPE: Journal Article  
RECORD TYPE: Abstract  
LANGUAGE: English  
SUMMARY LANGUAGE: English  
ISSN: 0019-9567  
FILE SEGMENT: Bacteriology Abstracts (Microbiology B)

Denoel, PA; Crawford, RM; Zygmunt, MS; Tibor, A; Weynants, VE;  
Godfroid, F; Hoover, DL; Letesson, J-J

5/3, K/7 (Item 7 from file: 24)  
DIALOG(R) File 24: CSA Life Sciences Abstracts  
(c) 2010 CSA. All rights reserved.

0001744565 IP ACCESSION NO: 4081351  
Characterization of smooth lipopolysaccharides and O polysaccharides of  
Brucella species by competition binding assays with monoclonal antibodies

Weynants, V; Gilson, D; Cloeckaert, A; Tibor, A; Denoel, PA;  
Godfroid, F; Li met, JN; Letesson, J-J  
Unite d'Immunologie-Microbiologie, Facultes Universitaires Notre-Dame de la  
Paix, 61 Rue de Bruxelles, B-5000 Namur, Belgium

Infection and Immunity, v 65, n 5, p 1939-1943, May 1997  
PUBLICATION DATE: 1997

DOCUMENT TYPE: Journal Article  
RECORD TYPE: Abstract  
LANGUAGE: English  
SUMMARY LANGUAGE: English  
ISSN: 0019-9567  
FILE SEGMENT: Bacteriology Abstracts (Microbiology B); Medical &  
Pharmaceutical Biotechnology Abstracts; Immunology Abstracts

Weynants, V; Gilson, D; Cloeckaert, A; Tibor, A; Denoel, PA;  
Godfroid, F; Li met, JN; Letesson, J-J  
? E AU=CASTADO, CI NDY

Ref	Items	Index-term
E1	4	AU=CASTADO C
E2	1	AU=CASTADO- TOSTADO EDUARDO
E3	7	* AU=CASTADO, CI NDY
E4	4	AU=CASTADOT
E5	2	AU=CASTADOT G
E6	23	AU=CASTADOT M
E7	15	AU=CASTADOT M J
E8	9	AU=CASTADOT M
E9	2	AU=CASTADOT M - J.
E10	5	AU=CASTADOT M J.
E11	8	AU=CASTADOT M J
E12	6	AU=CASTADOT MJ

Enter P or PAGE for more

? S E1-E3  
                   4 AU=CASTADO C  
                   1 AU=CASTADO- TOSTADO EDUARDO  
                   7 AU=CASTADO, CI NDY  
       S6          12 E1-E3

? RD

>>>Duplicate detection is not supported for File 393.

>>>Duplicate detection is not supported for File 391.

>>>Records from unsupported files will be retained in the RD set.

S7 12 RD (unique items)

? S S7 AND BORDETELLA

12 S7  
75297 BORDETELLA

S8 2 S7 AND BORDETELLA

? T S8/3, K/1-2

>>>KW C option is not available in file(s): 399

8/3, K/1 (Item 1 from file: 399)

DI ALOG(R) File 399: CA SEARCH(R)

(c) 2010 American Chemical Society. All rts. reserv.

142387960 CA: 142(21)387960r PATENT

Protein and nucleotide sequences of Bordetella protein BASB232 and its therapeutic use

INVENTOR(AUTHOR): Castado, Cindy; Denoel, Philippe; Godfroid, Fabrice; Poolman, Jan

LOCATI ON: Belg.

ASSIGNEE: Glaxosmithkline Biologicals S. A.

PATENT: PCT International ; WO 200532584 A2 DATE: 20050414

APPLI CATION: WO 2004EP11082 (20041001) \*GB 200323113 (20031002) \*GB 200323112 (20031002)

PAGES: 172 pp. CODEN: PIXXD2 LANGUAGE: English

PATENT CLASSI FI CATIONS:

CLASS: A61K-039/10A

DESIGNATED COUNTRIES: AE; AG; AL; AM; AT; AU; AZ; BA; BB; BG; BR; BW; BY; BZ; CA; CH; CN; CO; CR; CU; CZ; DE; DK; DM; DZ; EC; EE; EG; ES; FI; GB; GD; GE; GH; GM; HR; HU; ID; IL; IN; IS; JP; KE; KG; KP; KR; KZ; LC; LK; LR; LS; LT; LU; LV; MA; MD; MG; MK; MN; MW; MX; MZ; NA; NI; NO; NZ; OM; PG; PH; PL; PT; RO; RU; SC; SD; SE; SG; SK; SL; SY; TJ; TM; TN; TR; TT; TZ; UA; UG; US; UZ; VC; VN; YU; ZA; ZM; ZW DESIGNATED REGIONAL: BW; GH; GM; KE; LS; MW; MZ; NA; SD; SL; SZ; TZ; UG; ZM; ZW AM; AZ; BY; KG; KZ; MD; RU; TJ; TM; AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HU; IE; IT; LU; MC; NL; PL; PT; RO; SE; SI; SK; TR; BF; BJ; CF; CG; CI; CM; GA; GN; GQ; GW; ML; MR; NE; SN; TD; TG

8/3, K/2 (Item 1 from file: 357)

DI ALOG(R) File 357: Derwent Biotech Res.

(c) 2010 Thomson Reuters. All rts. reserv.

0368722 DBR Accession No.: 2005-14428 PATENT

Immunogenic composition, comprises polypeptide of Bordetella pertussis or mixture of different B.pertussis, antigens, useful in Bordetella disease treatments - a pharmaceutical composition comprising a recombinant vaccine against Bordetella pertussis useful for infection prevention and therapy

AUTHOR: CASTADO C; DENOEL P; GODFROID F; POOLMAN J

PATENT ASSIGNEE: GLAXOSMITHKLINE BIOLOGICALS SA 2005

PATENT NUMBER: WO 200532584 PATENT DATE: 20050414 WPI ACCESSI ON NO.: 2005-296056 (200530)

PRI ORITY APPLI C. NO.: GB 200323113 APPLI C. DATE: 20031002

NATI ONAL APPLI C. NO.: WO 2004EP11082 APPLI C. DATE: 20041001

LANGUAGE: English

Immunogenic composition, comprises polypeptide of Bordetella

pertussis or mixture of different B.pertussis, antigens, useful in Bordetella disease treatments - a pharmaceutical composition comprising a recombinant vaccine against Bordetella pertussis useful for infection prevention and therapy

AUTHOR: CASTADO C; DENOEL P; GODFROID F; POOLMAN J

ABSTRACT: DERVENT ABSTRACT: NOVELTY - An immunogenic composition (I), comprises a polypeptide of Bordetella pertussis comprising an amino acid sequence which has 85% identity to fully defined 737, 812...

... specification; or a mixture of 2-9 or 10 different B.pertussis, antigens, chosen from Bordetella autotransporter protein, Bordetella lipoprotein, Bordetella adhesin and Bordetella toxin/invasin; and an excipient. DETAILED DESCRIPTION - An immunogenic composition (I), comprises: (a) a polypeptide...

... 1) sequence given in specification; or (c) a mixture of 2-9 or 10 different Bordetella, preferably B.pertussis antigens, where the antigens are chosen from 2, 3, 4 or 5 groups of proteins chosen from (i) Bordetella autotransporter protein chosen from a polypeptide sharing at least 70% identity with the sequence of...

... or 54) and BipA and pertactin or its antigenic fragment, preferably its passenger domain; (ii) Bordetella iron acquisition protein chosen from a polypeptide sharing at least 70% identity with any one...

... SEQ ID Nos. 2-28 (even SEQ ID numbers)) or its antigenic fragment; (iii) a Bordetella lipoprotein chosen from a polypeptide sharing at least 70% identity to any one of 22...

... etc. (SEQ ID Nos. 56-98 (even SEQ ID numbers)) or its antigenic fragment; (iv) Bordetella adhesin chosen from FHA, fimbriae 2 and/or 3, pertactin and BrkA or its antigenic fragment; and (v) Bordetella toxin/invasin or antigens involved in toxin/invasin secretion chosen from pertussis toxin, adenylate cyclase, dermonecrotic toxin (Dnt), Type III ss or lipopolysaccharide or its antigenic fragment, where the Bordetella antigens in the immunogenic composition do not consist of any combination of 2, 3, 4...

... polypeptide of (SEQ Group 2). The polypeptide is part of a larger fusion protein. The Bordetella lipoprotein is MtA, MtB, VacJ, OrlA or Pcp, or their antigenic fragment. (I) comprises a...

... is expressed during the Bvg+ early phase, Bvg+ late phase, Bvgi or Bvg- phase of Bordetella infection. (I) further comprises diphtheria toxoid and tetanus toxoid, PRP capsular oligosaccharide or polysaccharide from...

... useful in the preparation of a medicament for use in the treatment or prevention of Bordetella disease. (I) and (II) are useful for treating or preventing Bordetella infections such as B.pertussis, B.parapertussis or B.bronchi-septica infections, by administering (II) to...

DESCRIPTORS: recombinant vaccine prep., Bordetella pertussis, autotransporter protein, lipoprotein, adhesin, toxin, invasins, excipient, hepatitis A virus, attenuation, pharmaceutical comp., appl

? E AU=DENOEL, PH?

Ref	Items	Index-term
E1	21	AU=DENOEL, PA
E2	2	AU=DENOEL, PH
E3	0	*AU=DENOEL, PH?
E4	32	AU=DENOEL, PHI LI PPE
E5	6	AU=DENOEL, PHI LI PPE A

E6 11 AU=DENOEL, PHI LI PPE A.  
 E7 6 AU=DENOEL, S.  
 E8 13 AU=DENOEL, V.  
 E9 6 AU=DENOEL, VI NCENT  
 E10 14 AU=DENOEL, X.  
 E11 1 AU=DENOER D  
 E12 3 AU=DENOES, CLAUDE

Enter P or PAGE for more

? S E1-E11

21 AU=DENOEL, PA  
 2 AU=DENOEL, PH  
 0 AU=DENOEL, PH?  
 32 AU=DENOEL, PHI LI PPE  
 6 AU=DENOEL, PHI LI PPE A  
 11 AU=DENOEL, PHI LI PPE A.  
 6 AU=DENOEL, S.  
 13 AU=DENOEL, V.  
 6 AU=DENOEL, VI NCENT  
 14 AU=DENOEL, X.  
 1 AU=DENOER D

S9 107 E1-E11

? S S9 AND BORDETELLA

107 S9

75297 BORDETELLA

S10 13 S9 AND BORDETELLA

? RD

>>>Duplicate detection is not supported for File 393.

>>>Duplicate detection is not supported for File 391.

>>>Records from unsupported files will be retained in the RD set.

S11 9 RD (unique items)

? T S11/3, K/1-9

>>>KW C option is not available in file(s): 399

11/3, K/1 (Item 1 from file: 24)

DI ALOG(R) File 24: CSA Life Sciences Abstracts

(c) 2010 CSA. All rts. reserv.

0003404273 IP ACCESSI ON NO: 8616170

Protective activity of the Bordetella pertussis BrkA autotransporter  
 in the murine lung colonization model

Marr, Nico; Oliver, David C; Laurent, Vincianne; Poolman, Jan;  
 Denoel, Philippe; Fernandez, Rachel C  
 Department of Microbiology and Immunology, University of British Columbia,  
 2350 Health Sciences Mall, Vancouver, BC, Canada V6T 1Z3,  
 [mailto:rachelf@nterchange.ubc.ca]

Vaccine, v 26, n 34, p 4306-4311, August 2008

PUBLICATION DATE: 2008

PUBLISHER: Elsevier Science, The Boulevard Langford Lane Kidlington Oxford  
 OX5 1GB UK, [mailto:userinfo-f@elsevier.com], [URL:http://www.elsevier.nl]

DOCUMENT TYPE: Journal Article

RECORD TYPE: Abstract

LANGUAGE: English

SUMMARY LANGUAGE: English

ISSN: 0264-410X

ELECTRONIC ISSN: 1873-2518

10574297BORDETELLA.txt

FILE SEGMENT: Bacteriology Abstracts (Microbiology B); Immunology Abstracts

Protective activity of the Bordetella pertussis BrkA autotransporter in the murine lung colonization model

Marr, Nico; Oliver, David C; Laurent, Vincianne; Poolman, Jan; Denoel, Philippe; Fernandez, Rachel C

ABSTRACT:

This study examined the vaccine potential of the autotransporter protein BrkA of Bordetella pertussis in the sublethal intranasal murine respiratory challenge model of infection. Five different acellular pertussis...

... DESCRIPTORS: models; BrkA protein; Clinical isolates; Colonization; Diphtheria; Hemagglutinins; Infection; Lung; Pertussis; Respiration; Tetanus; Toxoids; Vaccines; Bordetella pertussis

11/3, K/2 (Item 2 from file: 24)  
DIALOG(R) File 24: CSA Life Sciences Abstracts  
(c) 2010 CSA. All rights reserved.

0002868736 IP ACCESSION NO: 6972848  
Comparison of acellular pertussis vaccines-induced immunity against infection due to Bordetella pertussis variant isolates in a mouse model

Denoel, Philippe; Godfroid, Fabrice; Guiso, Nicole; Hallander, Hans; Poolman, Jan  
Research & Development, GlaxoSmithKline Biologicals, Rue de l'Institut 89, 1330 Rixensart, Belgium [mailto:philippe.denoel@skbio.com]

Vaccine, v 23, n 46-47, p 5333-5341, 2005  
PUBLICATION DATE: 2005

PUBLISHER: Butterworth-Heinemann, 313 Washington St. Newton MA 02158 USA

DOCUMENT TYPE: Journal Article

RECORD TYPE: Abstract

LANGUAGE: English

SUMMARY LANGUAGE: English

ISSN: 0264-410X

FILE SEGMENT: Bacteriology Abstracts (Microbiology B); Immunology Abstracts

Comparison of acellular pertussis vaccines-induced immunity against infection due to Bordetella pertussis variant isolates in a mouse model

Denoel, Philippe; Godfroid, Fabrice; Guiso, Nicole; Hallander, Hans; Poolman, Jan

ABSTRACT:

... observed in vaccinated populations. Concomitantly, emergence of novel pertussis toxin and pertactin types in circulating Bordetella pertussis isolates was noticed. In this study, immunity induced by acellular vaccines against infection due...

DESCRIPTORS: Vaccines; Pertussis; Immunity; Infection; Animal models; Adolescence; pertussis toxin; Pili; Bordetella pertussis



11/3, K/3 (Item 1 from file: 399)

DI ALOG(R) File 399: CA SEARCH(R)

(c) 2010 American Chemical Society. All rts. reserv.

146099123 CA: 146(6)99123k PATENT

Immunogenic composition containing *Neisseria meningitidis* capsular saccharides

INVENTOR(AUTHOR): Bi emans, Ralph Leon; Boutri au, Domi ni que; Capi au, Carine; Denoel, Philippe; Duvivier, Pierre; Pool man, Jan

LOCATI ON: Belg.

ASSI GNEE: Gl axosm thkline Bi ologi cal s S. A.

PATENT: PCT International ; WO 200700341 A2 DATE: 20070104

APPLI CATI ON: WO 2006EP6268 (20060623) \*GB 200513069 (20050627) \*GB 200513071 (20050627) \*GB 200515556 (20050728) \*GB 200524204 (20051128) \*GB 200526041 (20051221) \*GB 200526040 (20051221)

PAGES: 66pp. CODEN: PI XXD2 LANGUAGE: English

PATENT CLASSI FI CATI ONS:

I PCR/ 8 + Level Value Position Status Version Action Source Office:

A61K-0039/095 A I F B 20060101 H EP

A61K-0039/102 A I L B 20060101 H EP

A61K-0039/116 A I L B 20060101 H EP

DESIGNATED COUNTRIES: AE; AG; AL; AM; AT; AU; AZ; BA; BB; BG; BR; BW; BY; BZ; CA; CH; CN; CO; CR; CU; CZ; DE; DK; DM; DZ; EC; EE; EG; ES; FI; GB; GD; GE; GH; GM; HN; HR; HU; ID; IL; IN; IS; JP; KE; KG; KM; KN; KP; KR; KZ; LA; LC; LK; LR; LS; LT; LU; LV; LY; MA; MD; MG; MK; MN; MW; MX; MZ; NA; NG; NI; NO; NZ; OM; PG; PH; PL; PT; RO; RS; RU; SC; SD; SE; SG; SK; SL; SM; SY; TJ; TM; TN; TR; TT; TZ; UA; UG; US; UZ; VC DESIGNATED REGIONAL: AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HU; IE; IS; IT; LT; LU; LV; MC; NL; PL; PT; RO; SE; SI; SK; TR; BF; BJ; CF; CG; CI; CM; GA; GN; GQ; GW; ML; MR; NE; SN; TD; TG; BW; GH; GM; KE; LS; MW; MZ; NA; SD; SL; SZ; TZ; UG; ZM; ZW; AM; AZ; BY; KG; KZ; MD; RU; TJ; TM

11/3, K/4 (Item 2 from file: 399)

DI ALOG(R) File 399: CA SEARCH(R)

(c) 2010 American Chemical Society. All rts. reserv.

146099122 CA: 146(6)99122j PATENT

*Neisseria meningitidis* capsular polysaccharide vaccine conjugate

INVENTOR(AUTHOR): Bi emans, Ralph Leon; Boutri au, Domi ni que; Capi au, Carine; Denoel, Philippe; Duvivier, Pierre; Pool man, Jan

LOCATI ON: Belg.

ASSI GNEE: Gl axosm thkline Bi ologi cal s S. A.

PATENT: PCT International ; WO 200700314 A2 DATE: 20070104

APPLI CATI ON: WO 2006EP6188 (20060623) \*GB 200513071 (20050627) \*GB 200513069 (20050627) \*GB 200515556 (20050728) \*GB 200524204 (20051128) \*GB 200526040 (20051221) \*GB 200526041 (20051221)

PAGES: 46pp. CODEN: PI XXD2 LANGUAGE: English

PATENT CLASSI FI CATI ONS:

I PCR/ 8 + Level Value Position Status Version Action Source Office:

A61K-0039/095 A I F B 20060101 H EP

A61K-0039/102 A I L B 20060101 H EP

A61K-0039/116 A I L B 20060101 H EP

A61P-0031/04 A I L B 20060101 H EP

DESIGNATED COUNTRIES: AE; AG; AL; AM; AT; AU; AZ; BA; BB; BG; BR; BW; BY; BZ; CA; CH; CN; CO; CR; CU; CZ; DE; DK; DM; DZ; EC; EE; EG; ES; FI; GB; GD; GE; GH; GM; HN; HR; HU; ID; IL; IN; IS; JP; KE; KG; KM; KN; KP; KR; KZ; LA; LC; LK; LR; LS; LT; LU; LV; LY; MA; MD; MG; MK; MN; MW; MX; MZ; NA; NG; NI; NO; NZ; OM; PG; PH; PL; PT; RO; RS; RU; SC; SD; SE; SG; SK; SL; SM; SY; TJ; TM; TN; TR; TT; TZ; UA; UG; US; UZ; VC DESIGNATED REGIONAL: AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HU; IE; IS; IT; LT; LU; LV; MC; NL; PL; PT; RO; SE; SI; SK; TR; BF; BJ; CF; CG; CI; CM; GA; GN; GQ; GW; ML; MR; NE; SN; TD; TG; BW; GH; GM; KE; LS; MW; MZ; NA; SD; SL; SZ; TZ; UG; ZM; ZW; AM; AZ; BY; KG; KZ; MD; RU; TJ; TM

ZW AM AZ; BY; KG; KZ; MD; RU; TJ; TM

11/3, K/5 (Item 3 from file: 399)

DI ALOG(R) File 399: CA SEARCH(R)

(c) 2010 American Chemical Society. All rts. reserv.

146099120 CA: 146(6)99120g PATENT

Immunogenic composition containing *Neisseria meningitidis* capsular polysaccharides

INVENTOR(AUTHOR): Biemans, Ralph Leon; Boutriau, Dominique; Capi au, Carine; Denoel, Philippe; Duvivier, Pierre; Poolman, Jan

LOCATI ON: Belg.

ASSIGNEE: Glaxosmithkline Biologicals S.A.

PATENT: PCT International ; WO 200700342 A2 DATE: 20070104

APPLI CATI ON: WO 2006EP6269 (20060623) \*GB 200513069 (20050627) \*GB 200513071 (20050627) \*GB 200515556 (20050728) \*GB 200524204 (20051128) \*GB 200526040 (20051221) \*GB 200526041 (20051221)

PAGES: 64pp. CODEN: PIXXD2 LANGUAGE: English

PATENT CLASSI FI CATI ONS:

I PCR/ 8 + Level Value Position Status Version Action Source Office:

A61K-0039/095 A I F B 20060101 H EP

A61K-0039/102 A I L B 20060101 H EP

A61K-0039/116 A I L B 20060101 H EP

A61P-0031/04 A I L B 20060101 H EP

DESIGNATED COUNTRIES: AE; AG; AL; AM; AT; AU; AZ; BA; BB; BG; BR; BW; BY; BZ; CA; CH; CN; CO; CR; CU; CZ; DE; DK; DM; DZ; EC; EE; EG; ES; FI; GB; GD; GE; GH; GM; HN; HR; HU; ID; IL; IN; IS; JP; KE; KG; KM; KN; KP; KR; KZ; LA; LC; LK; LR; LS; LT; LU; LV; LY; MA; MD; MG; MK; MN; MW; MX; MZ; NA; NG; NI; NO; NZ; OM; PG; PH; PL; PT; RO; RS; RU; SC; SD; SE; SG; SK; SL; SM; SY; TJ; TM; TN; TR; TT; TZ; UA; UG; US; UZ; VC DESIGNATED REGIONAL: AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HU; IE; IS; IT; LT; LU; LV; MC; NL; PL; PT; RO; SE; SI; SK; TR; BF; BJ; CF; CG; CI; CM; GA; GN; GQ; GW; ML; MR; NE; SN; TD; TG; BW; GH; GM; KE; LS; MW; MZ; NA; SD; SL; SZ; TZ; UG; ZM; ZW AM AZ; BY; KG; KZ; MD; RU; TJ; TM

11/3, K/6 (Item 4 from file: 399)

DI ALOG(R) File 399: CA SEARCH(R)

(c) 2010 American Chemical Society. All rts. reserv.

146099118 CA: 146(6)99118n PATENT

Combination vaccines comprising *Haemophilus influenzae* type b saccharide conjugate, an addnl. bacterial saccharide conjugate, and further antigens

INVENTOR(AUTHOR): Biemans, Ralph Leon; Boutriau, Dominique; Capi au, Carine; Denoel, Philippe; Duvivier, Pierre; Poolman, Jan

LOCATI ON: Belg.

ASSIGNEE: Glaxosmithkline Biologicals S.A.

PATENT: PCT International ; WO 200700327 A1 DATE: 20070104

APPLI CATI ON: WO 2006EP6220 (20060623) \*GB 200513069 (20050627) \*GB 200513071 (20050627) \*GB 200515556 (20050728) \*GB 200524204 (20051128) \*GB 200526041 (20051221) \*GB 200526040 (20051221)

PAGES: 49pp. CODEN: PIXXD2 LANGUAGE: English

PATENT CLASSI FI CATI ONS:

I PCR/ 8 + Level Value Position Status Version Action Source Office:

A61K-0039/095 A I F B 20060101 H EP

A61K-0039/102 A I L B 20060101 H EP

A61K-0039/116 A I L B 20060101 H EP

DESIGNATED COUNTRIES: AE; AG; AL; AM; AT; AU; AZ; BA; BB; BG; BR; BW; BY; BZ; CA; CH; CN; CO; CR; CU; CZ; DE; DK; DM; DZ; EC; EE; EG; ES; FI; GB; GD; GE; GH; GM; HN; HR; HU; ID; IL; IN; IS; JP; KE; KG; KM; KN; KP; KR; KZ; LA; LC; LK; LR; LS; LT; LU; LV; LY; MA; MD; MG; MK; MN; MW; MX; MZ; NA; NG; NI; NO; NZ; OM; PG; PH; PL; PT; RO; RS; RU; SC; SD; SE; SG; SK; SL; SM; SY; TJ;

10574297BORDETELLA.txt

TM; TN; TR; TT; TZ; UA; UG; US; UZ; VC DESIGNATED REGIONAL: AT; BE; BG; CH  
; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HU; IE; IS; IT; LT; LU; LV; MC;  
NL; PL; PT; RO; SE; SI; SK; TR; BF; BJ; CF; CG; CI; CM; GA; GN; GQ; GW; ML;  
MR; NE; SN; TD; TG; BW; GH; GM; KE; LS; MW; MZ; NA; SD; SL; SZ; TZ; UG; ZM;  
ZW; AM; AZ; BY; KG; KZ; MD; RU; TJ; TM

11/3, K/7 (Item 5 from file: 399)

DI ALOG(R) File 399: CA SEARCH(R)

(c) 2010 American Chemical Society. All rts. reserv.

145005931 CA: 145(1)5931b JOURNAL

Are vaccination programs and isolate polymorphism linked to pertussis re-emergence?

AUTHOR(S): Godfroid, Fabrice; Denoel, Philippe; Poolman, Jan

LOCATION: DAP Bacterial Vaccine Preclinical Immunology, Research & Development, GlaxoSmithKline Biologicals, 1330, Rixensart, Belg.

JOURNAL: Expert Rev. Vaccines (Expert Review of Vaccines) DATE: 2005

VOLUME: 4 NUMBER: 5 PAGES: 757-779 CODEN: ERVXAX ISSN: 1476-0584

LANGUAGE: English PUBLISHER: Future Drugs Ltd.

11/3, K/8 (Item 6 from file: 399)

DI ALOG(R) File 399: CA SEARCH(R)

(c) 2010 American Chemical Society. All rts. reserv.

142387960 CA: 142(21)387960r PATENT

Protein and nucleotide sequences of Bordetella protein BASB232 and its therapeutic use

INVENTOR(AUTHOR): Castado, Gindy; Denoel, Philippe; Godfroid, Fabrice; Poolman, Jan

LOCATION: Belg.

ASSIGNEE: Glaxosmithkline Biologicals S. A.

PATENT: PCT International ; WO 200532584 A2 DATE: 20050414

APPLICATION: WO 2004EP11082 (20041001) \*GB 200323113 (20031002) \*GB 200323112 (20031002)

PAGES: 172 pp. CODEN: PIXXD2 LANGUAGE: English

PATENT CLASSIFICATIONS:

CLASS: A61K-039/10A

DESIGNATED COUNTRIES: AE; AG; AL; AM; AT; AU; AZ; BA; BB; BG; BR; BW; BY; BZ; CA; CH; CN; CO; CR; CU; CZ; DE; DK; DM; DZ; EC; EE; EG; ES; FI; GB; GD; GE; GH; GM; HR; HU; ID; IL; IN; IS; JP; KE; KG; KP; KR; KZ; LC; LK; LR; LS; LT; LU; LV; MA; MD; MG; MK; MN; MW; MX; MZ; NA; NI; NO; NZ; OM; PG; PH; PL; PT; RO; RU; SC; SD; SE; SG; SK; SL; SY; TJ; TM; TN; TR; TT; TZ; UA; UG; US; UZ; VC; VN; YU; ZA; ZM; ZW DESIGNATED REGIONAL: BW; GH; GM; KE; LS; MW; MZ; NA; SD; SL; SZ; TZ; UG; ZM; ZW; AM; AZ; BY; KG; KZ; MD; RU; TJ; TM; AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HU; IE; IT; LU; MC; NL; PL; PT; RO; SE; SI; SK; TR; BF; BJ; CF; CG; CI; CM; GA; GN; GQ; GW; ML; MR; NE; SN; TD; TG

11/3, K/9 (Item 7 from file: 399)

DI ALOG(R) File 399: CA SEARCH(R)

(c) 2010 American Chemical Society. All rts. reserv.

137184447 CA: 137(13)184447c PATENT

Vaccine composition comprising hyperblebbing Gram-neg. bacteria which have down-regulated tol genes and mutated peptidoglycan-binding proteins

INVENTOR(AUTHOR): Berthet, Francois-Xavier Jacques; Denoel, Philippe; Neyt, Cecile Anne; Poolman, Jan; Thonnard, Joelle

LOCATION: Belg.

ASSIGNEE: Smithkline Beecham Biologicals S. A.

PATENT: PCT International ; WO 200262378 A2 DATE: 20020815

APPLICATION: WO 2002EP1361 (20020208) \*GB 20013171 (20010208)

PAGES: 71 pp. CODEN: PIXXD2 LANGUAGE: English

PATENT CLASSIFICATIONS:

CLASS: A61K-039/00A

DESIGNATED COUNTRIES: AE; AG; AL; AM; AT; AU; AZ; BA; BB; BG; BR; BY; BZ;  
CA; CH; CN; CO; CR; CU; CZ; DE; DK; DM; DZ; EC; EE; ES; FI; GB; GD; GE; GH;  
GM; HR; HU; ID; IL; IN; IS; JP; KE; KG; KP; KR; KZ; LC; LK; LR; LS; LT; LU;  
LV; MA; MD; MG; MK; MN; MW; MX; MZ; NO; NZ; OM; PH; PL; PT; RO; RU; SD; SE;  
SG; SI; SK; SL; TJ; TM; TN; TR; TT; TZ; UA; UG; US; UZ; VN; YU; ZA; ZM; ZW;  
AM; AZ; BY; KG; KZ; MD; RU; TJ; TM DESIGNATED REGIONAL: GH; GM; KE; LS; MW;  
; MZ; SD; SL; SZ; TZ; UG; ZM; ZW AT; BE; CH; CY; DE; DK; ES; FI; FR; GB;  
GR; IE; IT; LU; MC; NL; PT; SE; TR; BF; BJ; CF; CG; CI; CM; GA; GN; GQ; GW;  
ML; MR; NE; SN; TD; TG

? S BORDETELLA AND PERTUSSI S AND FHA AND (PERTACTIN OR FIMBRAE)

75297 BORDETELLA

195842 PERTUSSI S

9168 FHA

3924 PERTACTIN

141 FIMBRAE

S12 751 BORDETELLA AND PERTUSSI S AND FHA AND (PERTACTIN OR  
FIMBRAE)

? S S12 AND COMBIN?

Processing

Processed 30 of 50 files ...

Completed processing all files

751 S12

11054844 COMBIN?

S13 169 S12 AND COMBIN?

? S S13 AND (IMMUNOG? OR ANTIGEN?)

Processing

Processed 20 of 50 files ...

Completed processing all files

169 S13

2430188 IMMUNOG?

5293245 ANTIGEN?

S14 146 S13 AND (IMMUNOG? OR ANTIGEN?)

? RD

>>>Duplicate detection is not supported for File 393.

>>>Duplicate detection is not supported for File 391.

>>>Records from unsupported files will be retained in the RD set.

S15 61 RD (unique items)

? T S15/3, K/1-10

>>>KW C option is not available in file(s): 399

15/3, K/1 (Item 1 from file: 5)

DIALOG(R) File 5: Biosis Previews(R)

(c) 2010 The Thomson Corporation. All rights reserved.

0020326616 BIOSIS NO.: 200800373555

Micosal DTPa vaccines

AUTHOR: Anonymous; Rappuoli Rino; Pizza Mariagrazia

AUTHOR ADDRESS: Siena, Italy\*\*Italy

JOURNAL: Official Gazette of the United States Patent and Trademark Office  
Patents OCT 9 2007 2007

PATENT NUMBER: US 07279169 PATENT DATE GRANTED: October 09, 2007 20071009

PATENT CLASSIFICATION: 424-2361 PATENT ASSIGNEE: Novartis Vaccines and

Diagnostics SRL PATENT COUNTRY: USA

ISSN: 0098-1133

DOCUMENT TYPE: Patent

RECORD TYPE: Abstract

LANGUAGE: English

**ABSTRACT:** Mucosal DTPa vaccines, especially intranasal vaccines, comprising (a) a diphtheria antigen, a tetanus antigen and an acellular pertussis antigen, and (b) a detoxified mutant of cholera toxin (CT) or E. coli heat labile toxin (LT). Component (b) acts as a mucosal adjuvant. The acellular pertussis antigen preferably comprises pertussis holotoxin (PT) and filamentous haemagglutinin (FHA) and, optionally, pertactin. The mucosally-delivered combined DTPa formulation is capable of generating a level of protection against B. pertussis infection equivalent to that observed by alum-adjuvanted parenteral administration.

**DESCRIPTORS:**

ORGANISMS: Bordetella pertussis (Alcaligenaceae...

DISEASES: Bordetella pertussis infection...

CHEMICALS & BIOCHEMICALS: ...pertactin; ...

...diphtheria antigen; ...

...tetanus antigen; ...

...acellular pertussis antigen; ...

...mucosal DTPa vaccine {diphtheria tetanus acellular pertussis vaccine

15/3, K/2 (Item 2 from file: 5)  
 DI ALOG(R) File 5: Bi o s i s P r e v i e w s ( R )  
 (c) 2010 The Thomson Corporation. All r t s . r e s e r v .

18144623 BI O S I S N O . : 200500051688

Adjuvant ic it y of nat iv e and detox if i e d adenylate cyclase toxin of  
 Bordetella pertussis towards co-administered antigens

AUTHOR: MacDonald-Fyall Julia; Xing Dorothy; Corbel Michael; Baillie Susan;  
 Parton Roger; Coot e John (Reprint)

AUTHOR ADDRESS: Div Infect and Immun Inst Biomed and Life Sci, Univ Glasgow,  
 Joseph Black Bldg, Glasgow, Lanark, G12 8QQ, UK\*\*UK

AUTHOR E-MAIL ADDRESS: j.coot e@i o . g l a . a c . u k

JOURNAL: Vaccine 22 (31-32): p4270-4281 October 22, 2004 2004

MEDI UM print

ISSN: 0264-410X (ISSN print)

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

Adjuvant ic it y of nat iv e and detox if i e d adenylate cyclase toxin of  
 Bordetella pertussis towards co-administered antigens

**ABSTRACT:** The cell-invasive adenylate cyclase toxin (CyaA) of  
 Bordetella pertussis was shown to be highly antigenic  
 in mice, stimulating serum anti-CyaA IgG antibody responses which were  
 able to neutralise the...

...fully functional CyaA toxin or a toxin lacking adenylate cyclase enzymic  
 activity (CyaA\*) with other antigens from B. pertussis,  
 namely pertussis toxin (PT) or pertussis toxoid (PTd),  
 filamentous haemagglutinin (FHA) and pertactin (PRN), was  
 investigated. CyaA\* enhanced the serum IgG antibody responses to each of  
 these antigens whereas, with CyaA, only anti-PRN antibody titres  
 showed a modest increase. Peritoneal macrophages and...

... nitric oxide (NO) and IFN $\gamma$  production, respectively, after stimulation in vitro with heat-killed B. pertussis cells or CyaA proteins. NO and IFN $\gamma$  production were higher in cells collected from mice immunised with CyaA or CyaA\* in combination with a PT, FHA and PRN antigen mixture than from those taken from mice injected with antigen mixture alone, again with CyaA\* acting as a better adjuvant than CyaA. The apparent enhancement of immune responses to the antigen mixture by CyaA\* in particular was not paralleled by increased protection of mice against aerosol challenge with B. pertussis, but a statistically significant increase in protection was seen after intranasal challenge with B. parapertussis...

DESCRIPTORS:

ORGANISMS: Bordetella parapertussis (Alcaligenaceae...

... Bordetella pertussis (Alcaligenaceae

DISEASES: Bordetella infection...

MESH TERMS: Bordetella Infections (MeSH)

CHEMICALS & BIOCHEMICALS: ... antigen; ...

... immunoglobulin G...

... pertactin-...

... pertussis toxin...

... pertussis toxoid

15/3, K/3 (Item 3 from file: 5)  
 DIALOG(R) File 5: Biosis Previews(R)  
 (c) 2010 The Thomson Corporation. All rights reserved.

17715372 BIOSIS NO.: 200400084141

Immunogenicity of a combined diphtheria-tetanus-acellular pertussis vaccine in adults.

AUTHOR: Van Damme Pierre (Reprint); Burgess Margaret

AUTHOR ADDRESS: Epidemiology and Social Medicine, Faculty of Medicine, University of Antwerp (UIA), Centre for the Evaluation, WHO Collaborating Centre for Prevention and Control of Viral Hepatitis, Universiteitsplein 1, B-2610, Antwerp, Belgium\* Belgium

AUTHOR E-MAIL ADDRESS: pierre.vandamme@ua.ac.be

JOURNAL: Vaccine 22 (3-4): p305-308 2 January, 2004 2004

MEDIUM: print

ISSN: 0264-410X (ISSN print)

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

Immunogenicity of a combined diphtheria-tetanus-acellular pertussis vaccine in adults.

ABSTRACT: Two clinical studies were undertaken to evaluate the immunogenicity of an adult-type dTpa booster vaccine (Boostrix<sup>TM</sup> by GlaxoSmithKline Biologicals). Blood samples taken prior...

... respectively. Moreover, about one-third of the vaccinees had no detectable levels of antibodies to pertussis toxoid (PT) or pertactin (PRN). One month post-vaccination, more than 93% of all individuals, regardless of age or...

... vaccine (Boostrix<sup>TM</sup>), more than 98% were found to be seropositive for antibodies to all three pertussis antigens (PT, filamentous

haemagglutinin (FHA), and PRN). These data suggest that immunity to diphtheria, tetanus and pertussis (DTP) in adults wanes and that booster vaccination with an adult-type combined dTpa vaccine would boost the serological response to diphtheria antitoxin, tetanus antitoxin and antibodies to Bordetella pertussis PT, FHA and PRN.

DESCRIPTORS:

ORGANISMS: Bordetella pertussis (Alcaligenaceae...

...DISEASES: pertussis--

CHEMICALS & BIOCHEMICALS: ...vaccine, Glaxo-SmithKline Biologicals, combined diphtheria-tetanus-acellular pertussis vaccine, immunogenicity; ...

...pertussis toxoid

15/3, K/4 (Item 4 from file: 5)  
 DI ALOG(R) File 5: Biosis Previews(R)  
 (c) 2010 The Thomson Corporation. All rights reserved.

16991947 BIOSIS NO.: 200200585458

Anti-pertactin antibodies are crucial for efficient Bordetella pertussis phagocytosis by neutrophils

AUTHOR: Hellwig S M M (Reprint); Rodriguez M E (Reprint); Berbers G A M; Mboi F R; van de Winkel J G J

AUTHOR ADDRESS: Immunotherapy Laboratory, Dept. of Immunology, University Medical Center, Utrecht, Netherlands\*\*Netherlands

JOURNAL: Abstracts of the General Meeting of the American Society for Microbiology 102 p174 2002 2002

MEDIUM: print

CONFERENCE/MEETING: 102nd General Meeting of the American Society for Microbiology Salt Lake City, UT, USA May 19-23, 2002; 20020519

SPONSOR: American Society for Microbiology

ISSN: 1060-2011

DOCUMENT TYPE: Meeting; Meeting Abstract

RECORD TYPE: Abstract

LANGUAGE: English

Anti-pertactin antibodies are crucial for efficient Bordetella pertussis phagocytosis by neutrophils

ABSTRACT: Bordetella pertussis (B. pertussis) is the etiologic agent of whooping cough, a disease that is re-emerging in many parts of the world despite high levels of vaccination. New acellular vaccines containing different combinations of purified virulence factors are being developed. Serological correlates of protection have been described for various antigens currently proposed as acellular pertussis vaccine components, such as pertussis toxin (PTx), filamentous hemagglutinin (FHA), pertactin (Prn) and fimbriae (Fim). However, the mechanism of protection is poorly understood. Phagocytosis represents an...

...defense mechanism. We recently demonstrated the presence of specific antibodies to be crucial for B. pertussis phagocytosis and phagocyte activation followed by bacterial killing. In the present study we investigated which B. pertussis antigens induce opsonic antibodies. For this purpose, pre and post immune sera from pertussis vaccinees (age: 4 years old) were tested for their ability to induce B. pertussis phagocytosis. Sera antibody titers against Prn, FHA, PTx, and Fim were determined by ELISA. Phagocytosis was quantified by a two-color flow...

...correlation was found between phagocytosis rates and antibody titers against Prn but not against other antigens. To further investigate

the influence of anti-Prn antibodies on B. pertussis phagocytosis, selected sera were depleted of antibodies against either Prn or Fim by incubation with the respective purified antigen. Solely sera depleted of antibodies against Prn showed a drastic decrease in its ability to...

... Consistent with these results, sera with high opsonophagocytic activity, as tested using wild type B. pertussis, failed to promote phagocytosis of a B. pertussis strain defective in Prn expression. Taken together these data indicate Prn as a crucial antigen for antibody-mediated phagocytosis of B. pertussis. These results provide biological basis for clinical observations that have demonstrated a close correlation between...

DESCRIPTORS:

ORGANISMS: Bordetella pertussis (Alcaligenaceae...  
CHEMICALS & BIOCHEMICALS: anti-pertactin antibodies...

... antigens;

15/3, K/5 (Item 5 from file: 5)  
DIALOG(R) File 5: Biosis Previews(R)  
(c) 2010 The Thomson Corporation. All rights reserved.

14304183 BIOSIS NO.: 199800098430

The efficacy of a whole cell pertussis vaccine and fimbriae against Bordetella pertussis and Bordetella parapertussis infections in a respiratory mouse model

AUTHOR: Willems Rob J L; Kamerbeek Judith; Geuijen Cecile A W; Top Janetta; Gielen Henk; Gaastra Wm; Mooi Frits R (Reprint)

AUTHOR ADDRESS: Res. Lab. Infectious Diseases, Natl. Inst. Public Health Environment, 3720 BA Bilthoven, Netherlands\*\*Netherlands

JOURNAL: Vaccine 16 (4): p410-416 Feb., 1998 1998

MEDIUM: print

ISSN: 0264-410X

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

The efficacy of a whole cell pertussis vaccine and fimbriae against Bordetella pertussis and Bordetella parapertussis infections in a respiratory mouse model

ABSTRACT: Due to local and systemic side-effects, the currently used, highly effective, whole-cell pertussis vaccines (WCVs) will be replaced by acellular vaccines (ACVs) in some countries. These ACVs contain detoxified pertussis toxin, either alone or in combination with the filamentous haemagglutinin, pertactin and fimbriae. Ongoing clinical trials show that ACVs are clearly less reactogenic than WCVs, and that ACVs comprised of three to five proteins are highly efficacious in inducing protection against Bordetella pertussis infections. An important unresolved question is, what the effect will be of the switch from WCVs to ACVs on the incidence of Bordetella parapertussis infections, the second causative agent of pertussis. A comparison of the efficacy of WCVs and ACVs against B. parapertussis infection is required to answer this question. We show that the Dutch WCV, although prepared from B. pertussis strains, protects against B. parapertussis infection in a murine respiratory model, although less efficiently than against B. pertussis infection. It was shown previously that the ACV components pertussis toxin, FHA and pertactin did not protect against B. parapertussis infection in a murine respiratory model. We have



10574297BORDETELLA.txt

investigated the efficacy of two other ACV components, B. pertussis serotype-2 and -3 fimbriae against B. parapertussis infection in the murine model. The B. pertussis fimbriae protected mice against B. parapertussis infection although less efficiently than against B. pertussis infection. This result indicates that B. pertussis and B. parapertussis fimbriae are antigenically distinct. B. pertussis fimbriae were found to be as efficacious as the WCV against B. pertussis infection. Our results are discussed in the light of the switch from WCVs to ACVs.

DESCRIPTORS:

ORGANISMS: Bordetella-parapertussis (Alcaligenaceae...

... Bordetella-pertussis (Alcaligenaceae

DISEASES: Bordetella-parapertussis infection...

... Bordetella-pertussis infection

MESH TERMS: Bordetella Infections (MeSH...

... Bordetella Infections (MeSH)

CHEMICALS & BIOCHEMICALS: whole-cell pertussis vaccine...

... Bordetella fimbriae vaccine

15/3, K/6 (Item 6 from file: 5)

DIALOG(R) File 5: Biosis Previews(R)

(c) 2010 The Thomson Corporation. All rights reserved.

13961452 BIOSIS NO.: 199799595512

Vaccine- and antigen-dependent type 1 and type 2 cytokine induction after primary vaccination of infants with whole-cell or acellular pertussis vaccines

AUTHOR: Ausiello Clara M; Urbani Francesca; La Sala Andrea; Lande Roberto; Cassone Antonio (Reprint)

AUTHOR ADDRESS: Dep. Bacteriol. Med. Mycol., Ist. Superiore Sanita, Viale Regina Elena 299, 00161 Rome, Italy\*\*Italy

JOURNAL: Infection and Immunity 65 (6): p2168-2174 1997 1997

ISSN: 0019-9567

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

Vaccine- and antigen-dependent type 1 and type 2 cytokine induction after primary vaccination of infants with whole-cell or acellular pertussis vaccines

ABSTRACT: Cytokine profiles were examined 1 month after primary vaccination of infants with a whole-cell pertussis vaccine (wP) (Connaught) or either of two acellular pertussis vaccines, aP-Chiron Biocine (aP-CB) or aP-SmithKline Beecham (aP-SB), each combined with diphtheria-tetanus toxoids (DT), in Bordetella pertussis antigen-stimulated or unstimulated peripheral blood mononuclear cells (PBMC). Pertussis toxin (PT), filamentous hemagglutinin (FHA), and pertactin (PRN) were used as antigens, and the children were defined as responsive when their PBMC proliferated in response to these antigens. The controls were either children who received only DT or children who received pertussis vaccine but whose PBMC did not proliferate upon stimulation with B. pertussis antigens (unresponsive children). Antigen-stimulated PBMC of responsive wP recipients were characterized by an elevated production of T-helper...

... aP vaccine-responsive recipients showed, in addition to the elevated IFN-gamma production, a consistent, antigen-dependent production of type 2 cytokines (IL-4 and IL-5), with PRN being the most and PT being the least effective antigen. Type 2 cytokine induction was more pronounced in aP-SB than in aP-CB recipients...

... 44 pg/ml (mean  $\pm$  standard error for five subjects each), respectively, after PRN stimulation). Appreciable, antigen-unstimulated (constitutive) IFN-gamma production was also detected in PBMC cultures of all vaccinees. However, this spontaneous IFN-gamma production was, in most vaccinees, significantly lower than the antigen-driven cytokine production. In contrast, no constitutive type 2 cytokine production was ever observed in any vaccine group. PBMC from the two control groups (either DT or pertussis vaccine recipients) did not show any type 2 cytokine production, while IFN-gamma production was comparable in both antigen-stimulated and unstimulated conditions. Absence of type 2 cytokines and low levels of constitutive IFN-gamma production were also seen in prevaccination children. Thus, pertussis vaccines induce in infants a basically type 1 cytokine profile, which is, however, accompanied by...

... expressed by aP-SB than by aP-CB recipients, and with PRN than with other antigens, and they are minimally expressed in wP recipients and with PT as antigen. Our data also highlight a constitutive IFN-gamma production in infancy, which might reflect natural...

... and which may have an impact on T-helper-cell cytokine pattern polarization consequent to pertussis vaccination.

## DESCRIP TORS:

ORGANISMS: Bordetella pertussis (Alcaligenaceae...

CHEMICALS &amp; BIOCHEMICALS:

MISCELLANEOUS TERMS: ACELLULAR PERTUSSIS VACCINE...

... ANTIGEN-DEPENDENT TYPE 1 CYTOKINE INDUCTION...

... ANTIGEN-DEPENDENT TYPE 2 CYTOKINE INDUCTION...

... PERTACTIN; ...

... PERTUSSIS TOXIN...

... WHOLE-CELL PERTUSSIS VACCINE

CONCEPT CODES:

15/3, K/7 (Item 7 from file: 5)  
 DIALOG(R) File 5: Biosis Previews(R)  
 (c) 2010 The Thomson Corporation. All rights reserved.

13656682 BIOSIS NO.: 199799290742

Collaborative study for the evaluation of enzyme-linked immunosorbent assays used to measure human antibodies to Bordetella pertussis antigens

AUTHOR: Lynn Freyja (Reprint); Reed George F; Meade Bruce D

AUTHOR ADDRESS: Cent. Biol. Eval. Res., HFM-490, Food Drug Adm., 1401 Rockville Pike, Rockville, MD 20852, USA\*\*USA

JOURNAL: Clinical and Diagnostic Laboratory Immunology 3 (6): p689-700  
 1996 1996

ISSN: 1071-412X

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

...study for the evaluation of enzyme-linked immunosorbent assays used to measure human antibodies to Bordetella pertussis antigens

ABSTRACT: Acellular pertussis vaccines are being evaluated in multiple clinical studies, and human immunogenicity data will likely be pivotal in the appraisal of vaccine responses between populations and the responses to different vaccine combinations. Antibody response to pertussis antigens is also used in the diagnosis of pertussis. An international study was designed to assess the comparability of data generated in different laboratories...

...linked immunosorbent assays (ELISAs). Thirty-three participating laboratories were asked to quantitate specific antibody to pertussis toxin (PT), filamentous haemagglutinin (FHA), pertactin (PRN), or fimbrial proteins (FIM) in 21 samples. Samples were to be assayed in triplicate...

...and regression analyses suggest that some laboratories generated comparable quantitative results, although direct comparison or combination of results from different laboratories remains difficult to support. Calibration to the U.S. Reference Pertussis Antiserum appears to have been successful at standardizing the results in some laboratories. Statistical analyses...

DESCRIPTORS:

ORGANISMS: Bordetella pertussis (Alcaligenaceae...

CHEMICALS & BIOCHEMICALS:

MISCELLANEOUS TERMS: ACELLULAR PERTUSSIS VACCINE...

...IMMUNOGENICITY;

CONCEPT CODES:

15/3, K/8 (Item 8 from file: 5)  
DIALOG(R) File 5: Biosis Previews(R)  
(c) 2010 The Thomson Corporation. All rights reserved.

11752134 BIOSIS NO.: 199395054400

Progress towards the development of new vaccines against whooping cough

AUTHOR: Rappouli Rino (Reprint); Podda Audino; Pizza Mariagrazia; Covacci Antonello; Bartoloni Antonella; De Magistris Maria Teresa; Nenci oni Luciano

AUTHOR ADDRESS: Immunobiol. Res. Inst. Siena, Via Fiorentina 1, 53100 Siena, Italy\*\*Italy

JOURNAL: Vaccine 10 (14): p1027-1032 1992

ISSN: 0264-410X

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

...ABSTRACT: developed by vaccine companies and research laboratories; all of them contain a detoxified form of pertussis toxin (PT) that may be present alone or combined with one or more other non-toxic proteins, such as filamentous haemagglutinin (FHA), pertactin (69 kDa), and the agglutinogens (AGG). Most of the vaccines contain a PT that has been inactivated by chemical treatment, a process that reduces the immunogenicity of the molecule and may not completely eliminate the risk of reversion to toxicity. To avoid these problems, we have constructed by genetic manipulation a mutant of Bordetella pertussis that produces a non-toxic form of PT. This molecule (PT-9K/129G) contains two...

... Following extensive preclinical studies, which have shown that PT-9K/129G is safe and more antigenic than the toxin treated with chemical agents, this molecule was tested for safety and immunogenicity in adult volunteers, 18-month-old children and 2-month-old infants. The molecule has been tested alone, combined with FHA and pertactin and also combined with diphtheria and tetanus toxoids. In all clinical studies PT-9K/129G proved to be safe and more immunogenic than chemically detoxified PT molecules. These results indicate that PT-9K/129G belongs to a...

DESCRIPTORS:

ORGANISMS: Bordetella pertussis (Alcaligenaceae...

CHEMICALS & BIOCHEMICALS:

MISCELLANEOUS TERMS: ... DIPHTHERIA TOXOID COMBINATION; ...

... IMMUNOGENICITY; ...

... PERTACTIN; ...

... PERTUSSIS TOXIN...

... TETANUS TOXOID COMBINATION;

CONCEPT CODES:

15/3, K/9 (Item 1 from file: 24)  
DIALOG(R) File 24: CSA Life Sciences Abstracts  
(c) 2010 CSA. All rights reserved.

0002049859 IP ACCESSION NO: 4646921  
Overview of Recent Clinical Trials of Acellular Pertussis Vaccines

Miller, E  
Public Health Laboratory Service, Communicable Disease Surveillance Centre,  
61, Colindale Avenue, London, NW9 5EQ

Biologicals, v 27, n 2, p 79-86, June 1999  
PUBLICATION DATE: 1999

PUBLISHER: Academic Press

DOCUMENT TYPE: Journal Article

RECORD TYPE: Abstract

LANGUAGE: English

SUMMARY LANGUAGE: English

ISSN: 1045-1056

FILE SEGMENT: Bacteriology Abstracts (Microbiology B)

Overview of Recent Clinical Trials of Acellular Pertussis Vaccines  
ABSTRACT:

... will therefore have to be compared on efficacy criteria. Ideally, acellular vaccines with the minimum antigen content necessary to ensure optimum protection should be used in order to avoid administration of superfluous antigens to children and to simplify licensing and batch release procedures. On the basis of the evidence so far available it seems unlikely that monocomponent pertussis toxin (PT) vaccines provide optimal protection and that multicomponent vaccines are needed to achieve a...

... cell vaccine. It is unclear whether all two component vaccines containing PT and filamentous haemagglutinin (FHA) have similar efficacy but on the available evidence the safest option for policy makers

would seem to be to use a vaccine with at least three components, PT+ FHA+pertactin. There is now good evidence that the five component vaccine which contains agglutinogens 2 and 3 in addition to PT/ FHA and pertactin provides the best protection and is the only acellular vaccine whose efficacy matches that of...

...use for some decades and their ability to protect against transmission as well as clinical pertussis has emerged. The decision to replace an effective whole-cell vaccine by an acellular vaccine...  
...question of value for money and the ease with which acellular DTP vaccines can be combined with conjugate polysaccharide vaccines such as Haemophilus influenzae type b. Whatever the decision of policy...

DESCRIPTORS: Pertussis; Vaccines; Immunization; Bordetella

pertussis

IDENTIFIERS: acellular pertussis vaccine

15/3, K/10 (Item 2 from file: 24)  
DIALOG(R) File 24: CSA Life Sciences Abstracts  
(c) 2010 CSA. All rights reserved.

0001846109 IP ACCESSION NO: 4309038  
Safety and immunogenicity of a combined  
diphtheria-tetanus-acellular pertussis-hepatitis B vaccine  
administered according to two different primary vaccination schedules

Giannanco, G; Miraghi, A; Zotti, C; Pignato, S; Volti, S Li;  
Giannanco, A; Soncini, Renato  
Istituto di Igiene e Medicina Preventiva, Università di Catania, Via  
Biblioteca 4, 95124 Catania, Italy

Vaccine, v 16, n 7, p 722-726, April 1998  
PUBLICATION DATE: 1998

DOCUMENT TYPE: Journal Article

RECORD TYPE: Abstract

LANGUAGE: English

SUMMARY LANGUAGE: English

ISSN: 0264-410X

FILE SEGMENT: Immunology Abstracts; Bacteriology Abstracts (Microbiology B)  
; Virology & AIDS Abstracts; Health & Safety Science Abstracts

Safety and immunogenicity of a combined  
diphtheria-tetanus-acellular pertussis-hepatitis B vaccine  
administered according to two different primary vaccination schedules

#### ABSTRACT:

The reactogenicity and immunogenicity of a tetravalent  
diphtheria-tetanus-acellular pertussis-hepatitis B (DTPa-HB) vaccine  
(SmithKline Beecham) were studied in 565 infants immunized according to...

...0 degree C. Both schedules proved satisfactory in obtaining high levels  
of antibodies against all antigens. The rates of serologic response  
against the different antigens reached 100% in both groups. Antibody  
titres against all vaccine components were elevated following both...

...the third dose of vaccine geometric mean antibody titres (GMTs) against  
D toxoid, filamentous haemagglutinin (FHA), pertactin (PRN) and  
hepatitis B (HB) were significantly higher in the 3, 5, 11 group than...

...at 6 months of age in infants immunized at 3, 5 and 11 months, but  
FHA and PRN were within the range of a DTPa vaccine with proven  
efficacy. We conclude that DTPa-HB vaccine was safe, well tolerated and

10574297BORDETELLA.txt

highly immunogenic. Both vaccination schedules (2, 4, 6 and 3, 5, 11) can be considered suitable for...

DESCRIPTORS: hepatitis B virus; diphtheria; tetanus; pertussis;  
vaccines; infants; diphtheria; tetanus; pertussis; vaccines;  
hepatitis B; Bordetella pertussis; Clostridium tetani;  
Corynebacterium diphtheriae; Hepatitis B virus